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SURPLUS POPULATION CAPACITIES OF MAJOR SEWER AND WATER SYSTEMS IN CENTRAL ONTARIO

Office of Economic Policy
Economic Development Branch
December 1978

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SUMMARY

1. There are a number of small municipalities scattered throughout the Region that are at, or near, the limits of their sewage capacities.

2. The City of Kitchener may have difficulties locating sufficient water supplies beyond the next five years.

3. The cities of Guelph and Barrie will need to expand their sewer systems within the next five years.

4. A number of centres on the north-west edge of the Toronto Area face similar technical problems related to expanding their sewage systems much beyond present capacities. Some of these centres already have little surplus sewage capacity.

5. There is the possibility that the population capacity being built into the major sewer systems of South Peel and York-Durham (both of which are now under construction) will not be fully utilized by the turn of the century.

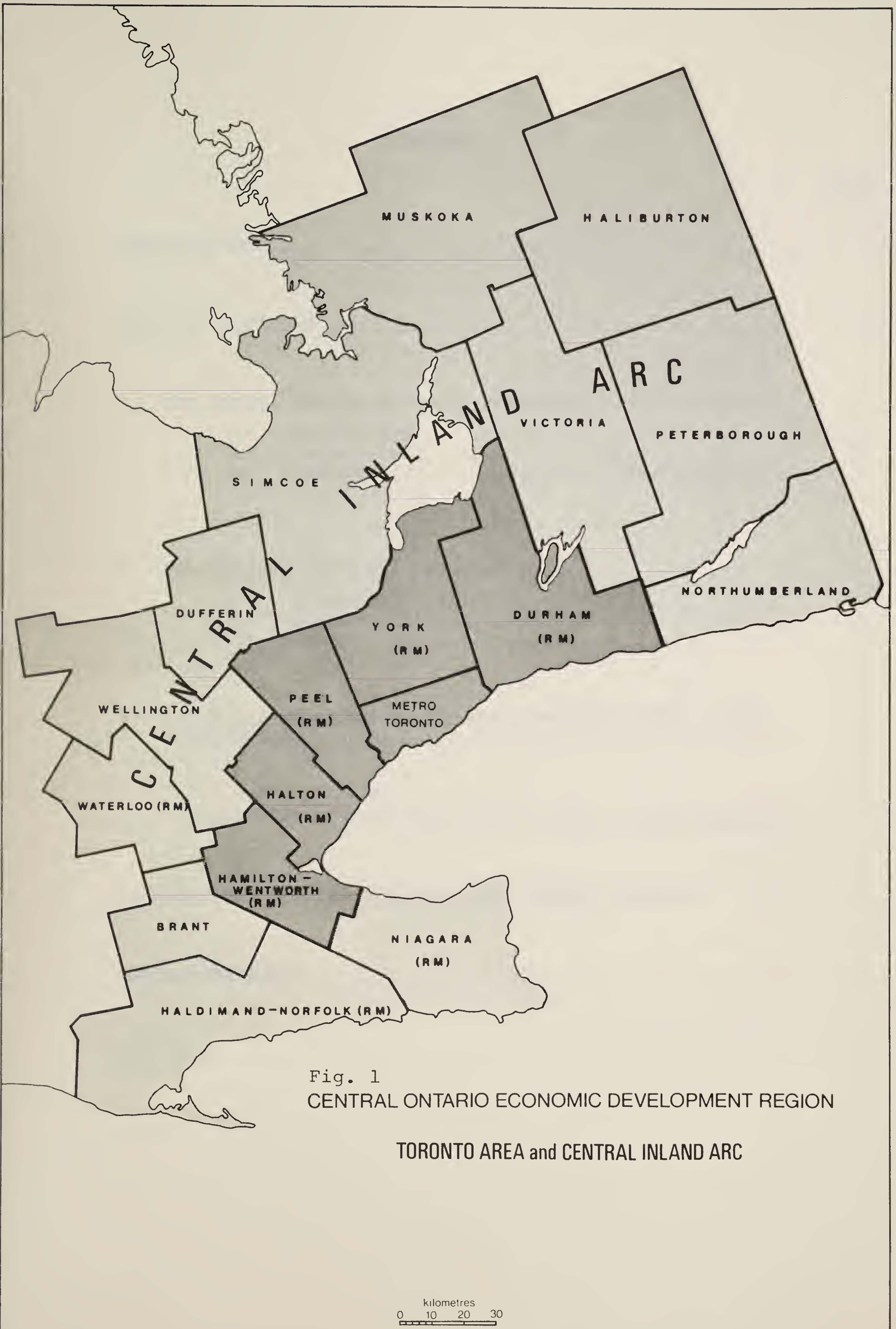
MUSKOKA
HALIBURTON
CENTRAL INLAND ARC
VICTORIA
PETERBOROUGH
SIMCOE
NORTHUMBERLAND
DUFFERIN
YORK (RM)
DURHAM (RM)
WELLINGTON
PEEL (RM)
METRO TORONTO
HALTON (RM)
WATERLOO (RM)
HAMILTON-WENTWORTH (RM)
BRANT
NIAGARA (RM)
HALDIMAND-NORFOLK (RM)
kilometres
0 10 20 30

Fig. 1
CENTRAL ONTARIO ECONOMIC DEVELOPMENT REGION

TORONTO AREA and CENTRAL INLAND ARC

MINISTRY OF TREASURY, ECONOMICS AND INTERGOVERNMENTAL AFFAIRS

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INTRODUCTION

This report reviews the ability of major sewer and water systems in Central Ontario to accommodate population growth over the next five to ten years. Major systems are in effect the major municipalities of Central Ontario; the only systems large enough to cover a number of municipalities are the South Peel and the York-Durham schemes now under construction.

The heart of the exercise is the set of tables in the appendix. Table One lists the surplus population capacity of major municipal sewer and water systems, where surplus population capacity is the extra number of people that can be added to the system in addition to the population the system presently serves. The municipalities are grouped by County or Regional Municipality.

This table also gives a capacity surplus (+) or deficit (-) for each system in every municipality, as a guide to how much extra capacity there is in the system relative to the population growth of the municipality. Roughly speaking, a plus (surplus) indicates no immediate service problems whereas a minus (deficit) indicates the possibility of the system being overloaded by anticipated medium-term (five years or so) population growth. Since the time between planning a major addition to a system and its completion is roughly five years, systems that appear to be in trouble in the medium term will need action taken in the near future.

The York-Durham and South Peel schemes are treated a little differently (Tables 2 and 3) on account of their size, the long time horizon involved before all capacity in these schemes becomes available, and because these schemes are meant to replace existing sewer treatment plants in a number of centres. Instead of concentrating on additions to capacity, the total capacity of the system is compared to the total population projected in the year 2001 for the area where the system is to operate.

The written material summarizes the findings of the tables to highlight systems or areas where there could be a problem of excess or a shortage of sewer or water capacity.

CAPACITY PROBLEMS

In general problems with water and sewer capacity are not rampant throughout the region, nor are any major cities or growth centres presently facing serious constraints because of a lack of capacity.

In the short term, however, a few small municipalities scattered randomly throughout the region have at present little or no extra sewage capacity. One of these, Midland, has been suggested as a stimulation centre in the revised Central Ontario Strategy.

In the medium term (five years or so), Kitchener, Guelph and Barrie could run short of sewer capacity (or water capacity in the case of Kitchener). Barrie is being considered for the role of a primary development centre in the northern subregion of the Central Ontario Strategy presently being written.

The municipalities of Orangeville and Shelburne in Dufferin County and the centres of Acton, Georgetown and Milton in the northern part of the Regional Municipality of Halton face technical problems in expanding their sewage systems beyond present capacities because of the very small streams these systems discharge into and the large volume of discharge these streams must absorb.

Finally the two major systems being built in the Toronto area, the South Peel and the York-Durham, have the potential to accommodate considerably more people on their sewer systems than some projections estimate will be in the appropriate area by the year 2001.

1. The Short-Term Problems of Scattered Municipalities

The three municipalities in question are Bracebridge in the District of Muskoka, Campbellford in Northumberland County and Midland in the County of Simcoe.

All are small municipalities with a population served by their service systems of about 10,000 people or less.

In all cases the problems is one of sewer capacity rather than water availability. A brief description of the situation in each municipality follows:

(a) Bracebridge has a surplus population capacity in its sewer system of roughly 1,000 people, enough for a few years but not likely to last for five. The town already has about 1,000 lots approved for building on and if this number of houses are built and occupied without expansions to the sewer system, the system will be overextended.

At present the town is attempting to cut down on the amount of storm water the system carries, which by cutting down on the flow in effect raises the capacity of the system. As well, because the town's lagoon type treatment system was originally designed to accommodate future expansions, the problems and costs associated with an expansion are minimal.

(b) Campbellford has no additional sewer capacity at present. Right now the system is over-committed.

The system was designed for a flow of one million gallons per day but is now handling 1.2 million gallons per day. This, however, is much better than the 1.8 million gallons per day the system was handling until quite recently. The reduction in flow is due to measures being taken to lower the amount of storm water going through the system. This upgrading of the storm sewer system is being aided by funds from the Ontario Government's Priority Budget.

The town is in the process of developing an expansion to their sewage facilities, but no construction dates have yet been announced.

(c) Midland is at present slightly over maximum sewer system capacity, with an average daily flow of 1.9 million gallons, slightly above the 1.25 MGD design capacity of the existing treatment plant. An expansion to bring the flow at the plant up to 3.0 MGD is in the design stage but no completion date has been announced.

An added complication in Midland is that Ministry of Environment standards require an upgrading of the sewage treatment facilities from a relatively simple primary treatment system to a more complex (and more costly) secondary system involving aeration as well as settling. Also, Midland is presently developing a 50-acre industrial park (and has obtained $500,000 from the Regional Priority Budget to do so) which will be serviced from the town's treatment plant.

2. Medium-Term Capacity Problems

The cities of Guelph and Barrie face the possibility of over-extending their sewage capacity in the next five years or so, while Kitchener will have water supply problems in the near future.

(a) Kitchener relies for the bulk of its water supplies on well water, but is having trouble finding new wells.

The surplus population capacity in the water system is presently about 3,000 people, with an additional surplus population capacity of slightly over 11,000 people on Waterloo's water system (Kitchener being able to draw on Waterloo for additional water). Thus, the two combined have enough surplus population capacity in their water systems to accommodate population growth for about four to five years.

A recent report by the Regional Municipality of Waterloo on water demand and supply in the Region[1] has suggested that additional water will have to be taken

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[1] Water Demand and Supply, 1976-2001, Department of Planning and Development, The Regional Municipality of Waterloo, September, 1978.

out of the Grand River and treated for Kitchener's use, as is already being done on a limited scale through river-connected wells. The feasibility of this scheme, which faces problems of river water quality and flow, is to be tested in the near future.

Another proposal put forward by the Ministry of the Environment a few years ago, is to pump water from Lake Erie to Kitchener as an extension of the Townsend system. The cost of this scheme ($50-100 million) plus the scaling down of the Townsend services appears to have removed the idea from serious contention.

(b) Guelph has at present a surplus population in its sewer system of just over 8,000 people. This is not large for a system serving 70,000 people. A rough estimate would give Guelph about five years before its present surplus sewer capacity will be used up. Given the lengthy lead time for system expansion, the beginnings of the process will have to be put in place in the near future.

The Ministry of the Environment is aware of the coming need for an expansion of Guelph's sewer system, but so far has not been involved with the City on any expansion plans.

(c) The situation in Barrie is roughly parallel to that in Guelph. The city (Barrie) has at present a surplus population capacity of about 6,600 people on its sewer system which is not great for a system serving 35,000 people. An expansion of the sewer capacity will have to be undertaken within the next five years or so.

As with Guelph, the Ministry of the Environment is aware of the situation, but so far knows of no action that has been taken on an expansion.

3. Technical Problems on the North-Western Edge of the Toronto Area

Despite marked differences in surplus population capacity, the centres of Acton, Georgetown and Milton in the north end of the Regional Municipality of Halton, plus Orangeville and Shelburne in the County of Dufferin, face similar technical problems associated with the expansion of their sewer systems beyond present limits. For this reason, these towns can be grouped together as one special problem area.

All of these centres need a very "clean" sewage discharge to avoid contaminating the small and environmentally sensitive streams their effluent flows into. The problem is compounded by the large number of towns and villages using these streams as sewage waterways and by rapid population growth in the area (for example, Shelburne and Orangeville both grew at an average annual rate of between 8 and 10 per cent between 1971 and 1976, compared to an average annual rate of 1.4 per cent for the Province of Ontario as a whole).

Conventional primary and secondary methods of sewage treatment don't purify the sewage to the extent needed. According to the Ministry of the Environment what is required is "high technology", or tertiary treatment, involving charcoal filters, biodisks, and chemical processes, to avoid stream contamination. Thus the combination of small streams and a large and growing population in the area result in the need for unique treatment methods not commonly found in other parts of the Region.

The installation of "high technology" treatment plants is now in the planning and development stage at Orangeville and Shelburne. Shelburne is already polluting the Boyne River with a sewage overflow of well over 100,000 gallons per day, while Orangeville has reserve sewage capacity for two or three more years only.

Acton, approaching the limit of its sewage capacity will soon have to go to tertiary treatment. The present surplus capacity in the sewer system, which has just been expanded slightly, isn't expected to last beyond the next five years.

Georgetown and Milton, while facing the same technical constraints have considerable excess capacity in their existing systems. Georgetown could be good for twenty years on the basis of the capacity there now. On the other hand, if capacity problems in other towns in the area divert population to these two centres their excess capacity could be used up more rapidly than presently anticipated.

These technical constraints to sewage expansion have however delayed approval of Milton's proposed 1,400-acre Industrial Park. Before giving approval the Ministry of the Environment, concerned that the town's sewage system might become over-extended by industrial development, wants the town to agree to limit industries in the park to those using little sewage. The matter is presently under negotiation.

4. Surplus Capacity in the Toronto Area in the Year 2001

The possibility of surplus capacity in the Toronto area in the year 2001 arises in conjunction with the development of the South Peel and York-Durham sewer systems. As background, both systems are multi-million-dollar projects. ($150 million plus for the South Peel; $200 million plus for the York-Durham) designed primarily to provide sewage capacity for the urban areas of the Regional Municipalities of Peel and York, and the Towns of Pickering and Ajax in the Regional Municipality of Durham. As well as providing additional population capacity the two systems will replace existing treatment plants. Allowance has been made in the Town of Pickering section of the York-Durham system for a North Pickering Community with up to some 90,000 persons (see Table 2).

Construction of the main sewer pipes and pumping stations in both systems is going on right now and is expected to be completed sometime in the 1980's. Capacity on the ground, however, is dependent on the hookup of feeder pipes, which will be phased in gradually to give approximate capacities by the turn of the century of 936,900 people in Peel, 457,000 people in York, and 369,300 people in Durham.

If these capacity figures are compared with population projections for the year 2001 for the areas the systems are to serve there appears to be capacity available well beyond the year 2001 in some cases. Estimates of how much capacity there is beyond the turn of the century differ depending on the population projections used. In general the population projections of the Regional Municipalities are quite close to the above capacities of the two sewer systems while the 2001 population projections of the EDB are considerably below the above system capacities.

Extra population capacity beyond 2001 can be an indication of foresight in planning and no doubt is in most cases. However, some of the differences are large enough to warrant examination. For example, using the above capacity figures for the year 2001 and the EDB population projections the total surplus population capacity of the two systems in 2001 is close to 500,000 people.

This estimated surplus population capacity is not evenly distributed between Peel, York and Durham. In Peel the "ultimate population" estimate of the Regional Municipality of 950,000 people is a good match with the ultimate capacity of the South Peel sewer system of 936,900 people. The EDB projection of 750,000 people in Peel in the year 2001 however produces a surplus population capacity of 186,900 people at the turn of the century, assuming that the 936,900 capacity is developed by then (see Table 3).

Similarly in York the capacity being built into the system, and an estimate of the urban population in York in the year 2001 (417,500 people) based on a Regional Municipality projection, are reasonably close. However an estimate by the EDB of York's 2001 urban population gives a surplus population capacity of 107,000 people at the turn of the century. As well, there may be a question of the distribution of capacity between urban centres within York as suggested by Table 2, although the estimates of the population of these centres in 2001 aren't to be considered terribly accurate.

The Regional Municipality of Durham shows the greatest amount of possible surplus population capacity for the year 2001. The total population capacity of the Durham part of the system (the Towns of Ajax and Pickering) will

be 369,300 people by approximately 2001, while figures taken from Durham's population map plus a 90,000 allocation to the North Pickering Community puts the total number of people in the area in about 2001 at 265,500. This gives an extra population capacity of just over 100,000 people. If the EDB population projection for the area is used, the extra capacity estimate goes to 178,000 people (see Table 2).

In addition, the capacity estimate used here for the Durham section of the system does not include a second-stage phase, to be built at a later date in the Town of Pickering, which adds a capacity of close to 55,000 people to the total. With this capacity included, an estimate of additional capacity past the year 2001 based on Regional Municipality population projections would be 150,000 people, while a similar estimate based on an EDB population projection would be 228,000 people.

IMPLICATIONS FOR THE STRATEGY FOR CENTRAL ONTARIO

The service capacity information gathered to date implies that the Strategy for Central Ontario's economic development policy outside the Toronto Area need not be concerned with water and sewer capacity, except possibly in the City of Barrie and the Town of Midland.

Peterborough, the major centre proposed for stimulation in the eastern subregion, has service capacity for about thirty years. Brantford, the largest centre proposed for aid in the southwestern subregion, has enough water and sewer capacity to last a minimum of twenty years. No centre in either subregion has less than about ten years of population growth in its surplus system capacity.

In the northern subregion Collingwood[1] and Orillia both have sewer and water capacity for twenty years or more. As indicated, Barrie and Midland are drawing close to their capacity limits, although Midland has a sewer system expansion in the design stage and Barrie has enough capacity left in its sewer system to allow the system to be expanded before this capacity is over-extended. As long as sewer system expansions in these two centres follow a normal development path with no lengthy delays, system capacities will be no problem.

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[1] The surplus population capacity of the Collingwood sewer system may be reduced slightly if a plan presently being considered by MOE to service Collingwood Township resort areas from the Collingwood and Thornbury sewage plants is adopted.

RECOMMENDATIONS

It is recommended that two objectives be pursued relative to sewer and water capacities in Central Ontario. These are:

(a) A review of the population capacities being built into the South Peel and York-Durham sewer systems in light of the differences between population capacities and some of the population projections.

(b) A joint review with the Ministry of the Environment of the surplus population capacities of the sewer systems of Midland and Barrie in light of the possible designation of these urban areas as growth centres in the forthcoming Central Ontario Strategy.

In the case of the review of population capacities in the South Peel and York-Durham systems, the Branch may want to consider a joint review with the Ministry of the Environment and the Regional Municipalities concerned. The Ministry of the Environment is building the size of the system largely from population projections supplied by the Regional Municipalities and thus are more likely to pay attention to a capacity review of the system if this review has the support of the Regional Municipalities.

As regards the review of surplus capacity in Midland and Barrie, the Branch might want to explain its concerns to both the Land Use Co-ordination section and the Project Co-ordination Branch of the Ministry of the Environment to try to get the support of both the planning and priority setting units of that Ministry.

POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
BRANT						
Brantford	- Sewers	13,700	39,500	53,200	2,400	+50,800
	- Water	13,700		13,700	2,400	+11,300
		The Brantford City sewer system expansion is due to be completed in 1979. This system serves a few, 3,000-3,050, people in adjacent Brantford Township.				
DUFFERIN						
Orangeville	- Sewers	1,100		1,100	3,900	-2,800
	- Water	7,300		7,300	3,900	+3,400
Shelburne	- Sewers	-1,500		-1,500	1,100	-2,600
	- Water	2,000		2,000	1,100	+ 900
		Since both Orangeville and Shelburne discharge sewage---continued page 2.				

Source: The capacity figures come from interviews with MOE field offices, carried out in the summer of 1977, and later written up as the report Piped Services in Central Ontario: A Survey of Current Surplus Population Capacity. Where necessary, figures have been updated to reflect recent changes.

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[1] The last column is calculated by subtracting the 1971-76 population change from the Total Surplus Population Capacity. If there are no expansions in the system being looked at, and population growth in the next five years is the same as in the last five, the system will have in the early 1980's the capacity indicated in this column. The last column then is a guide to the adequacy of the system to handle future population growth but not an exact indication of future capacity or the lack of it.

continued

POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

(continued from page 1)

into the small and environmentally sensitive headwaters of the Credit and Boyne rivers respectively, there are problems in expanding their sewage systems much beyond the present size and still maintain river water quality. The Shelburne system is already overloaded and polluting the Boyne. MOE, who are studying the problem, say that the answer lies in "high technology" sewage treatment before discharge.

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
DURHAM						
Bowmanville	- Sewer	1,600	11,600	13,200	300	+ 12,400
	- Water	0	9,000	9,000	300	+ 8,700
Newcastle	- Sewer	1,300		1,300	400	+ 900
	- Water	0	10,000	10,000	400	+ 6,600
Oshawa	- Sewer	57,500	86,200	143,700	12,000	+131,700
	- Water	95,500		95,500	12,000	+ 83,500
Whitby	- Sewer	16,600	24,800	41,400	2,800	+ 38,600
	- Water	21,500	134,000	155,500	2,800	+152,700

The Towns of Pickering and Ajax are covered in the York-Durham Table.

continued

POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
HALDIMAND-NORFOLK						
Caledonia	- Sewer	2,800		2,800	300	+2,500
	- Water	2,300		2,300	300	+2,000
Dunnville	- Sewer	2,900		2,900	200	+2,700
	- Water	2,700		2,700	200	+2,500
Port Dover	- Sewer	(to be part of the Townsend system)				
	- Water	6,800		6,800	-	+6,800
Simcoe	- Sewer	10,000		10,000	1,200	+8,800
	- Water	1,600		1,600	1,200	+ 800

MOE are constructing major water and sewer systems in Haldimand-Norfolk in connection with the new Town of Townsend. Total population capacity of the two systems will be 50,000 people on water and 66,000 on sewer, allocated between the following urban areas.

Sewer
Townsend - 40,000 people
Jarvis - 5,000 "
Hagersville - 5,000 "
Waterford - 4,000 "
Port Dover - 12,000 "

Water
Townsend - 40,000 people
Jarvis - 5,000 "
Hagersville - 5,000 "

In addition to the above, the two systems will serve Stelco's mill site and industrial park.

Although not finalized, staging of the sewer system is said to be as follows: by 1981, the pipes will be to East Townsend, Hagersville and Jarvis; by 1986 to Port Dover; by 1996 to West Townsend; and by 2007 to Waterford.

The urban areas population figures came from Haldimand-Norfolk's Draft Regional Plan, which also gives a turn-of-the-century population figure of 22,000 people in Simcoe, 13,000 in Caledonia and 10,500 in Dunnville.

continued

POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
HALIBURTON						
Haliburton	- Sewer	300		300	50	+ 250
	- Water	-		-		
Minden	- Sewer	1,500		1,500	300	+1,200
	- Water	2,800		2,800	300	+2,500

Minden's sewers are still under construction but due to be hooked up this Fall. The capacity figures are estimates.

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
HALTON						
Burlington	- Sewers	11,300	128,800	140,100	18,200	+121,900
	- Water	68,400		68,400	18,200	+ 50,200
Oakville	- Sewers	900	24,000	24,900	10,500	+ 14,400
	- Water	21,800	44,400	66,200	10,500	+ 55,700
Acton	- Sewers	0	400	400	700	- 300
	- Water	1,300		1,300	700	+ 600
Georgetown	- Sewers	0	14,900	19,900	2,100	+ 12,800
	- Water	23,900		23,900	2,100	+ 21,800
Milton	- Sewers	0	8,900	8,900	6,500	+ 2,400
	- Water	11,700		11,700	6,500	+ 5,200

As the sewage of Acton, Georgetown and Milton discharges into small waterways, there are environmental problems in increasing their respective sewer system capacities much beyond the present limits. As in the case of Orangeville and Shelburne, MOE feels the the answer to expansion is to use more technology to treat the sewage before discharge.

continued..

POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
HAMILTON-WENTWORTH						
Hamilton (plus Stoney Creek	- Sewers	28,400	177,500	205,900	68,000	+199,100
	- Water	218,800		218,800	7,100	+211,700
Waterdown	- Sewers	900		900	100	+ 800
	- Water	900		900	100	+ 800
Dundas	- Sewers	0	25,000	25,000	300	+ 24,700
	- Water	(is part of the Hamilton water system)				
MUSKOKA						
Bracebridge	- Sewer	0	1,100	1,100	1,500	- 400
	- Water	3,500		3,500	1,500	+ 2,000
Gravenhurst	- Sewer	3,200		3,200	900	+ 2,300
	- Water	4,400		4,400	900	+ 3,500
Huntsville	- Sewer	- 900	7,100	6,200	1,300	+ 4,900
	- Water	1,500		1,500	1,300	+ 200

The Bracebridge sewer system, a lagoon type with a twice-yearly discharge into the Muskoka River, is close to its capacity limits. Alternate ways of treating the Town's sewage are being discussed.

continued

POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
NIAGARA						
Fort Erie	- Sewers	0	2,300	2,300	900	+ 1,400
	- Water	13,100	3,700	16,800	900	+15,900
Niagara Falls	- Sewers	13,100	22,600	35,700	2,300	+33,400
	- Water	51,200		51,200	2,300	+48,900
Niagara-on-the Lake	- Sewers	3,100		3,100	-100	+ 3,100
	- Water	3,100		3,100	-100	+ 3,100
Port Colborne	- Sewers	0	12,500	12,500	-900	+12,500
	- Water	2,400	26,500	28,900	-900	+28,900
St. Catharines	- Sewers	81,500		81,500	14,000	+67,500
	- Water	88,700		88,700	14,000	+74,700
Welland	- Sewers	11,400		11,400	700	+10,700
	- Water	11,800	35,300	47,100	700	+46,400

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		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
NORTHUMBERLAND						
Brighton	- Sewers	4,000		4,000	200	+ 3,800
	- Water	3,300		3,300	200	+ 3,100
Campbellford	- Sewers	0		0	-	-
	- Water	1,400		1,400	-	+ 1,400
Cobourg	- Sewers	2,400	10,700	13,100	100	+13,000
	- Water	11,800		11,800	100	+11,700
Colborne	- Sewers	0	4,500	4,500	100	+ 4,400
	- Water	2,400		2,400	100	+ 2,300
Port Hope	- Sewers	2,000		2,000	900	+ 1,100
	- Water	10,700		10,700	900	+ 8,800

A number of water and sewer improvements have been funded in Northumberland under the Regional Priority Budget, as part of the Northumberland Development Strategy. These include: the increase in capacity in sewers in Cobourg; a leak detection study and study of the water systems in Campbellford; a storm sewer in Campbellford; and improvements to Port Hope's water system. Also proposed for RPB funding is a water supply study in Brighton and Colborne; and sanitary sewer upgrading in Port Hope.

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
PETERBOROUGH						
Peterborough	- Sewers	11,800		11,800	1,500	+10,300
	- Water	13,200		13,200	1,500	+11,700

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POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSION	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
SIMCOE						
Barrie	- Sewers	6,600		6,600	6,700	- 100
	- Water	25,600		25,600	6,700	+18,900
Collingwood	- Sewers	6,800		6,800	1,300	+ 5,500
	- Water	14,000		14,000	1,300	+12,700
Midland	- Sewers	0		0	600	- 600
	- Water	2,600		2,600	600	+ 2,000
Orillia	- Sewers	9,100		9,100	400	+ 8,700
	- Water	12,100		12,100	400	+11,700
METROPOLITAN TORONTO						
	- Sewers	64,800	314,200	379,000	34,600	+344,400
	- Water	(no data)				
VICTORIA						
Lindsay	- Sewers	4,800		4,800	300	+ 4,500
	- Water	13,100		13,100	300	+12,800

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POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
WATERLOO						
Cambridge	- Sewers	33,000		33,000	7,600	+25,400
	- Water	18,200		18,200	7,600	+10,600
Kitchener	- Sewers	83,000		83,000	14,900	+68,100
	- Water	3,100		3,100	14,900	-11,800
Waterloo	- Sewers	31,300		31,300	8,300	+23,000
	- Water	11,300		11,300	8,300	+ 3,000

Water is presently a problem in Kitchener, with the system being close to capacity.

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
WELLINGTON						
Fergus	- Sewers	1,600		1,600	600	+ 1,000
	- Water	4,200		4,200	600	+ 3,600
Guelph	- Sewer	8,200		8,200	7,500	+ 700
	- Water	44,000		44,000	7,500	+36,500

Guelph's sewer system, which has just been expanded to the above capacity, is still "fairly tight", but no new expansion plans have been announced.

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POPULATION CAPACITY OF SEWER AND WATER SYSTEMS BY COUNTY OR REGIONAL MUNICIPALITY

		SURPLUS POPULATION CAPACITY 1978	ANNOUNCED EXPANSIONS	TOTAL SURPLUS POPULATION CAPACITY	1971-76 POPULATION CHANGE	"HYPOTHETICAL"[1] CAPACITY SURPLUS (+) OR DEFICIT (-) 1982
YORK						
Aurora	- Water	3,100		3,100	600	+2,500
Newmarket	- Water	0		0	5,900	-5,900

New wells are being drilled in both Aurora and Newmarket. Capacity figures are not yet known.

POPULATION CAPACITY OF THE YORK-DURHAM SEWER SYSTEM TABLE 2

	POPULATION CAPACITY	TEIGA POPULATION ESTIMATE - 2001	CAPACITY SURPLUS (+) OR DEFICIT (-)	REGIONAL MUNICIPALITY POPULATION ESTIMATE - 2001	CAPACITY SURPLUS (+) OR DEFICIT (-)
YORK - 2001					
Vaughan	117,700	60,000	+ 57,700	71,600	+ 46,100
Markham	164,300	100,000	+ 64,300	119,400	+ 44,900
Richmond Hill	100,000	95,000	+ 5,000	113,500	- 13,500
Newmarket	44,000	60,000	- 16,000	71,600	- 27,600
Aurora	31,000	35,000	- 4,000	41,400	- 10,400
TOTAL	457,000	350,000	+107,000	417,500	+ 39,500
DURHAM - 2001					
North Pickering Community	90,000	90,000	0	90,000	0
Pickering	143,700	48,300	+ 95,400	100,500	+ 43,200
Ajax	135,600	53,000	+ 82,600	75,000	+ 60,600
TOTAL	369,300	191,300	+178,000	265,500	+103,800

Source: The Population Capacity figures come from a report by James F. MacLaren Limited, produced for the Ministry of the Environment on population capacity of the York-Durham system. This report is due to be updated over the next few months. MacLaren attempts to work from figures supplied by the Regional Municipalities.

The York Region area municipality population estimates are on EOB calculation based on York's total population estimate in the year 2001 of 538,000 people. Durham's area municipality figures are taken from the Durham Official Plan Population Map.

The population capacity figures used here do not include a second phase of the York-Durham to be built in Pickering and to have capacity for approximately 55,000 people.

POPULATION CAPACITY OF THE SOUTH PEEL SEWER SYSTEM TABLE 3

	POPULATION CAPACITY	TEIGA POPULATION ESTIMATE	CAPACITY SURPLUS (+) OR DEFICIT (-)	REGIONAL MUNICIPALITY POPULATION ESTIMATE	CAPACITY SURPLUS (+) OR DEFICIT (-)
PEEL - 1985	1985	1985			
Mississauga	381,200	363,000	+ 18,200		
Brampton	157,600	150,000	+ 7,600		
Caledon	34,400	33,000	+ 1,400		
TOTAL	573,200	546,000	+ 27,200		
PEEL - 2001	2001	2001		2001	
Mississauga	623,000	498,000	+125,000	630,800	- 7,800
Brampton	257,700	206,000	+ 51,700	261,200	- 3,500
Caledon	56,200	46,000	+ 10,200	58,000	- 1,800
TOTAL	936,900	750,000	+186,900	950,000	-13,100

Source: The Population Capacity figures were supplied by MOE's South Peel Systems Office, who say that the capacity figures were developed in conjunction with Peel Region's Planning Department.

The Peel Region area municipality population estimates are an EDB calculation based on Peel's total ultimate population estimate of 950,000 people.

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